

Running Injury Prevention

WHAT'S YOUR RUNNING INJURY RISK? (check all that apply below)

- I've injured my foot, ankle, leg, knee, hip or back in the past year. (see all of prevention plan)
- I am just beginning to run after being inactive for at least three weeks. (see progress)
- I run over 40 miles per week. (see cross-train)
- I typically increase my running mileage/time by more than 10% a week. (see progress)
- During the day, I often wear shoes with high-heels or flat soles/arches. (see shoes)

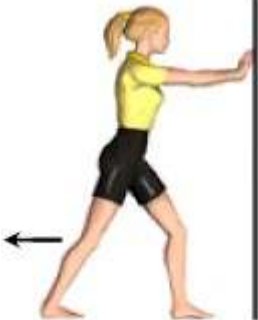
REDUCE THE RISK OF INJURY BY FOLLOWING A PREVENTION PLAN:


- **Shoes** - firm arches and lateral support, and adequate heel cushion.
- **Cool-Down** - After running, stretch while the muscles/tendons are still warm. This helps improve flexibility over time. Do 6-8 repetitions of each stretch. (See stretching exercises).
- **Warm-Up** - Inactive muscles are at risk to stretching too far or tearing. Jog easy for five minutes to increase your heart rate slightly and break into a light sweat. This helps increase blood flow to the muscles and warms them up.
- **Progress** - Increasing running distance or time no more than ten percent a week.
- **Cross-train** - Limit running and impact cardio exercise to four days per week. Studies show that doing high impact activities more than four days per week increases the risk of overuse injuries. Rest a day in between running workouts.
- **Balance** - Running and cardio activities with strengthening 2-3 times per week and stretching 5-7 times per week.

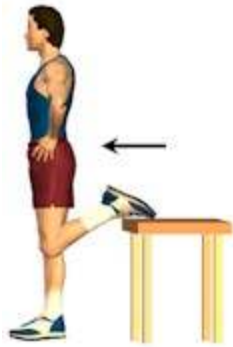
Stretching Exercises

Stretching loosens tight muscles to enhance your running and decrease your risk of injury.

Technique	Stretch to the point of a gentle pull and hold for at least 20 seconds.
Frequency:	Do six repetitions/stretchers daily, while the muscles are warm.

	<p>Calf Stretch</p> <ul style="list-style-type: none"> • Stand with your feet pointed forward • Keep your heels down and back leg straight. • Slowly bend the front leg until you feel a gentle upper calf stretch in the back leg.
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	<p>Hamstring Stretch</p> <ul style="list-style-type: none"> • Sit with one leg straight and the other leg bent out to the side. • Slowly lean forward with your chest until you feel a stretch along the back of your thigh.
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Stork Stretch (quad)

- Stand with your back straight and knee bent.
- Place your foot on a table or chair, keeping your thigh pointing straight down.
- Squeeze your behind together and shift your hips forward slightly until you feel a stretch along the front of your thigh.
- **Don't lean forward or twist your hips.**



Kneeling Stretch (hip)

- Kneel on the leg that you're going to stretch.
- Squeeze your behind together and shift your hips forward slightly until you feel a stretch along the front of your thigh.
- **Don't lean over or twist your hips.**



Cross-Over (outer hip)

- Lie on your back and cross one knee over your other leg.
- With the opposite hand, pull the knee up and over toward the opposite shoulder, until you feel an outer hip stretch.
- **Keep your foot flat on the ground.**



Side Bend

- Sit or stand with your back straight.
- Raise your arm and slowly bend your body over to the opposite side until you feel a stretch.
- **Do not bounce or lean forward.**



Figure Four (outer hip)

- Lie on your back with one leg flexed up at the hip and bent 90° at the knee.
- Pull the knee and ankle together, up and over toward the opposite shoulder.
- Hold when you feel an outer hip stretch.



Cat (mid back and low back)

- Kneel on your hands and knees.
- Slowly arch your back up toward the ceiling.
- Hold when you feel a stretch in your mid and low back.




Glute


- Lie on your back with your legs straight.
- Pull one knee up towards the opposite shoulder until you feel a stretch along the outer hip.



Heel Stretch

- Stand with your feet pointed forward and heels down.
- Slowly bend the back leg until you feel a lower calf or heel stretch along that leg.


	<p>Butterfly (inner thigh)</p> <ul style="list-style-type: none"> • Sit with your back straight and knees bent. • Place the soles of your feet together. • Drop your knees toward the floor, until you feel a stretch along the inside of your thighs.
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	<p>Trunk Rotation</p> <ul style="list-style-type: none"> • Lie on your back with your knees bent and feet on the floor. • Slowly lower your knees to one side until you feel a stretch on that side then hold. • Repeat on the opposite side.
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Ankle Strengthening

Will give you more power as well as help prevent ankle sprains and shin splints.

Technique	Sit with your foot flat on the floor and push it (the foot shouldn't move, but the lower leg muscles will tighten) against a stationary object for 3-5 counts, then relax.
Frequency:	Do three sets of 10-15 repetitions, three days per week.

	<p>Outer Shin (push out)</p> <ul style="list-style-type: none"> • Push your foot out against a heavy object.
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	<p>Front of Shin (push up)</p> <ul style="list-style-type: none"> • Place the heel of one foot on top of the toes of the opposite foot. • Push down with the top heel while trying to push up with the bottom foot.
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	<p>Inner Shin (push in)</p> <ul style="list-style-type: none"> • Push your feet in against each other.
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Knee and Hip Strengthening

Will give you more power as well as help prevent knee and hip injuries.

Technique	Perform each exercise slowly, hold for 2-3 counts at the end position.
Frequency:	Do 2-3 sets of 8-15 repetitions, 3-4 days per week. Rest a day between workouts.
Progression:	Add or increase the weight or resistance when you can complete all three sets of 15 repetitions without fatigue.

	<p>Clam (outer hip)</p> <ul style="list-style-type: none"> • Lie on your side with hips bent forward 45°, feet together and knees bent approximately 45°. • Slowly rotate your top kneecap up toward the ceiling until your knees are approximately one hand-width apart. • Hold, then slowly lower the top leg. • Do not lean your hips back or lift up the top foot.
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	<p>Leg Press</p> <ul style="list-style-type: none"> • Adjust the platform so your knees are bent at 90° or less. • Place your feet on the platform. • Pushing through the balls of your feet, straighten your knees, hold, then slowly bend them. • Don't completely straighten the knees. • Keep your feet flat on the platform.
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Hip Squat (glute)

- Stand with one side of your body against a wall.
- Squeeze your buttocks together and hold.
- Keep squeezing your buttocks through the entire set.
- Slowly bend the injured knee to 45°.
- Hold, then slowly straighten the knee.



Leg Curls (hamstring)

- Position yourself on the machine.
- Slowly bend your knees as far as possible.
- Hold then slowly let your legs straighten.
- Do not arch your back or lift your hips off the machine.